savannah river site strategic plan

21st century stewards *for the* nation

a strategic plan

for 2000

and beyond ...

looking forward

savannah river site SRS

A message from the manager

During this first year of the 21st century, we will celebrate the Savannah River Site's 50th anniversary. We look back with pride on our years of significant contributions to our nation and our world, and with excitement and confidence in our future. We've helped end the Cold War. We've reduced global nuclear danger. And, we've made notable progress in environmental cleanup. This year, we'll also celebrate the site's future by looking forward to a significant, enduring, and larger role in the stewardship of our country's nuclear weapons stockpile, nuclear materials, and the environment.

"These significant **new missions** *are a* **proud vote** *of* **confidence."**

As the last decade closed, the U.S. Department of Energy chose SRS for significant new missions. These new missions are a clear vote of confidence and acknowledgment of the talents of the site's men and women, our unique technical capabilities, our strong base of community support, and our proven track record of results. Our people, our technical infrastructure, and our community are the heart of our past success and our future achievements.

Our new missions are exciting opportunities. We will continue to provide tritium recycling and storage, while constructing and operating a new facility for the extraction of tritium to support the nuclear weapons stockpile. We'll also construct and operate several new facilities to store and dispose of surplus plutonium as part of the nation's nuclear nonproliferation efforts. In addition, SRS will play an increasingly larger role in advancing nuclear materials protection, control, and accounting.

We've made significant progress in environmental cleanup and restoration at SRS. We will continue to work closely with our regulators to effectively correct the environmental problems of the past. We will also integrate environmental stewardship into the design, construction, and future operation of the site's new facilities and programs.

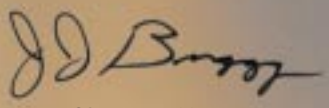
At SRS, we have long recognized the strengths underlying our many achievements: a culture based on world-class safety and technical excellence; a sound security posture; unique technical capabilities and facilities; cost effectiveness; research, development, and deployment of new technologies; and strong community support. To enhance and share these assets, we are partnering with other sites and laboratories in the DOE Complex to achieve results and help us better meet the missions of the site and the department.

As 21st century stewards for our nation's nuclear weapons stockpile, nuclear materials, and the environment, SRS is entrusted with tremendous responsibilities. To provide a context and roadmap for meeting these responsibilities, we've prepared this SRS Strategic Plan. We have updated our vision and strategic goals in partnership with our site contractors and support agencies. In developing this plan, we built upon our previous Strategic Plan (December 1997) and considered previous planning efforts, customer needs and comments from our stakeholders, and the *Statements of Principles* signed last September by the Secretary of Energy and the Governor of South Carolina. The leaders of SRS organizations helped develop this plan, and are committed to achieving its vision by working internally as a team and with our customers, stakeholders, and regulators.

SRS has served the nation with pride for 50 years. Together, we're looking forward to a bright future in the new century.

GREG RUDY, Manager
U.S. Department of Energy
Savannah River Operations Office

"We pledge to commit our organizations to support and implement the vision established in this Strategic Plan."



JOSEPH J. BUGGY
President
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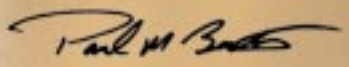


PAUL BERTSCH
Director
Savannah River Ecology Laboratory

DAVID WILSON
Manager
U.S. Forest Service

MISSION

We serve the nation through safe, secure, cost-effective management of our nuclear weapons stockpile, nuclear materials, and the environment.

VISION

SRS will be a modernized DOE site, recognized for performance and excellence in support of our national security and as a responsible steward of the environment.

Our Values & Focus

SRS will succeed only through the individual and collective efforts of our most important resource: our people. We recognize it is imperative to shape and support a culture that values safety, security, teamwork, disciplined operations and continuous improvement – all in a cost-effective manner. We value the broad range of ideas, experience and contributions of a diverse workforce, and are committed to excellence and ethical behavior in all we do. We also are committed to maintaining a productive work environment of mutual respect and equal opportunity where the talents and capabilities of all employees are recognized. To ensure success in current and future missions, we do our work with a continuous emphasis in five focus areas that form the foundation of the Corporate Management section of this plan. These SRS Focus Areas are listed and described at right.

Many challenges of the our nation will face are viewed as

SRS focuses on three mission areas associated with products and services essential to achieving the Department of Energy's (DOE) goals:

Nuclear Weapons Stockpile Stewardship

Nuclear Materials Stewardship

Environmental Stewardship

This Strategic Plan highlights each stewardship area, which are based on functions, not DOE programs. The Corporate Management section addresses fundamental business principles, or "SRS Focus Areas," critical to the success of the site's stewardship missions. This section also addresses the unique technical capabilities of the Savannah River Technology Center (SRTC), integral to achieving success in the three stewardship areas.

Stewardship is the responsibility for the careful use of money, time, talents, and other resources, especially with respect to the principles and/or needs of a community.

Nuclear Weapons Stockpile Stewardship . . .

. . . emphasizes science-based maintenance of the nuclear weapons stockpile. SRS supports the stockpile by ensuring the safe and reliable recycle, delivery, and management of tritium resources; by contributing to the stockpile surveillance program; and by our ability to assist in the development of alternatives for large-scale pit production capability, if required.

Nuclear Materials Stewardship . . .

. . . is the management of excess nuclear materials, including transportation, stabilization, storage, and disposition to support nuclear nonproliferation initiatives. Primary nuclear materials in this program include components from dismantled weapons, residues from weapons processing activities, spent nuclear fuel, and other legacy materials.

Environmental Stewardship . . .

. . . involves management, treatment, and disposal of radioactive and non-radioactive wastes resulting from past, present, and future operations. This stewardship includes pollution prevention and restoration of the environment impacted by site operations. Environmental Stewardship also encompasses the site's extensive natural and cultural resources.

Corporate Management . . .

. . . addresses the successful accomplishment of our three stewardship missions through five fundamental principles or Focus Areas: Safety and Security; Technical Capability and Performance; Community, State and Regulator Relationships; Cost-Effectiveness; and Corporate Perspective. These Focus Areas crosscut all site functions, defining how work is done at SRS, with an emphasis on achieving results and continually improving performance. A key example is SRTC's focus on technologies that improve safety, increase productivity, and reduce life cycle costs of operations.

Safety and Security	to protect our workers, the public, and the environment and to protect our national security interests.
Technical Capability and Performance	to achieve mission requirements through a skilled, motivated workforce and to ensure that SRS facilities and infrastructure are available to support SRS missions.
Community, State and Regulator Relationships	to demonstrate to our community, state, and regulatory agencies that SRS meets its obligations and communicates openly and honestly.
Cost Effectiveness	to provide effective stewardship of taxpayer resources.
Corporate Perspective	to manage SRS through effective teamwork internally and with the Department and the nation.

strategic opportunities *for SRS.*

Current Situation

During the Cold War, SRS served the nation by producing nuclear materials critical to its strong nuclear deterrent. While the need remains to continue this deterrence, the nation now faces additional challenges, including the proliferation of nuclear weapons and materials. The site's missions have expanded from primarily a defense mission to include environmental cleanup and the stabilization, storage, and preparation for final disposition of nuclear materials.

As we enter a new millennium, SRS is poised to fulfill a significant, enduring, and even larger role for the nation in the stewardship of the nuclear weapons stockpile, nuclear materials, and the environment. To do so, we will build on our 50-year history of successful delivery of results. This includes safe, secure, effective, and cost-efficient operations through teamwork and sharing of SRS facilities, expertise, and technologies across the site and the DOE Complex, as well as with other governmental agencies, private entities, and universities.

A key element of our post-Cold War success comes from continuing efforts to maintain effective customer and stakeholder relationships and partnering with national laboratories in support of our three stewardship missions. SRS continues to build on the trust placed in us by our regional and national supporters through open communication and ongoing vigilance in safety and security.

Future Challenges

Future challenges include ensuring adequate funding, continual focus on safety and security, finding solutions to technical challenges, deploying best-in-class project management, and retaining, recruiting, and training a highly-skilled, motivated workforce. Many of the challenges to be faced by the nation in the next 50 years are viewed as strategic opportunities for SRS. As new opportunities arise, and new missions are assigned, additional funding will be provided to support the additional work requirements.

Over the next decade, we will invest in new or updated facilities and site infrastructure to create a modernized site complex. We will continue to seek efficiencies in operations and pursue scientific research, development, and deployment of new technologies to achieve our missions. We will also work with the Department of Energy Headquarters and the State of South Carolina to ensure an offsite disposition path for high-level waste and nuclear materials and to find mutually acceptable solutions for disposition of low-level and mixed wastes. We are committed to meeting these challenges in fulfilling our vitally important national security, nonproliferation, and environmental stewardship responsibilities, as outlined in this Strategic Plan.

UNIQUE CAPABILITIES

310 square miles of buffered, protected land with access to water, highway, rail, and air transportation

50-year history of safe and secure nuclear operation, waste management, and applied research and development

Extensive expertise in tritium production and handling

Integrated nuclear processing capability with fully developed waste stream treatment and disposal systems.

In keeping with its 50-year tradition,

The effectiveness of the SRS planning process is ultimately demonstrated by mission and program results.

In keeping with its 50-year tradition, SRS contributes to the stewardship of the nation's nuclear weapons stockpile, nuclear materials, and environment – safely, securely, and cost-effectively.

Since the last SRS Strategic Plan was published in 1997, the site has achieved key accomplishments, described at right.

- Continued the tradition of delivering the nation's tritium-filled reservoirs to the Department of Defense 100 percent on time.
- Selected by the Secretary of Energy as the site to construct and operate the Tritium Extraction Facility – a key component of the national security program.
- Selected by the Secretary of Energy as the site for disposition of surplus plutonium materials in support of the nation's nuclear nonproliferation effort.
- Closed two high-level waste tanks successfully by deploying new technology to remove waste from the tanks and filled over 700 canisters with vitrified, high-level waste – the first DOE site to do so.
- Stabilized at-risk legacy materials including F-Canyon plutonium solutions, Mark-31 targets, and Taiwan Research Reactor spent nuclear fuel.
- Supported early closure of the Rocky Flats Field Office through a high priority project to modify the K-Reactor Area as a plutonium-storage facility.
- Supported the nation's goal of reducing the worldwide nuclear proliferation threat through SRS's safe receipt and storage of spent nuclear fuel from foreign research reactors.
- Provided practical and effective technology solutions vital to current and future site missions through the Savannah River Technology Center, a unique, applied research and development laboratory at SRS.
- Closed 83 waste units in the Environmental Restoration Program in the last two years, bringing the total number of closures to 221.

Unique facilities such as the Defense Waste Processing Facility for vitrifying high-level waste, the Consolidated Incineration Facility for treating mixed low-level radioactive waste, and the chemical separations canyons for processing nuclear materials

Extensive nuclear research and production facilities and infrastructure

Strong mission-supportive research, development, and deployment capabilities

History of successful natural resource management

Highly-trained protective force, possessing specialized security response capabilities

Onsite researchers providing independent, scientifically-credible evaluation of the ecological effects of SRS operations on the environment and communicating this information to the scientific community, DOE, and the public

Strong community support

SRS has continued *to achieve* results.

- Completed the retrieval of approximately 6,000 buried drums of transuranic (TRU) waste two years ahead of schedule, reducing the potential buildup of hydrogen gas.
- Conducted innovative research, development, and delivery of cost-effective technologies, including demonstration of the "can-in-canister" plutonium disposition concept.
- Achieved cost efficiency savings of $124 million, contributing to a five-year savings of over $1.7 billion.
- Successfully deployed 19 innovative technologies in the Environmental Restoration Program, resulting in over $180 million of life-cycle cost reductions over the last three years.
- Documented savings of over $125 million on a $5.3 million investment in pollution prevention, receiving two national DOE Achievement Awards and a second Hammer Award.
- Created the Crackerneck Wildlife Management Area and Ecological Reserve, adding 10,000 site acres to the State of South Carolina's natural resource management system.
- Managed the red-cockaded woodpecker recovery program to assure an average population growth of at least 10 percent per year.
- Fostered excellent stakeholder and regulator relationships and active participation with the SRS Citizens' Advisory Board.
- Received many awards for safety, performance, and quality, demonstrating the site's commitment to excellence. A few examples include:

  SRS security contractor awarded the safety "Voluntary Protection Program (VPP) Star Status" and SRS operating contractor awarded "VPP Merit Status."

  Reviewed and maintained certification under the International Standards Organization (ISO) 14001, Environmental Management System.

  Awarded South Carolina Governor's Gold and Silver Awards for Quality.

  SRS security contractor received the "Energy Performance Excellence Award for Achievement."
- SRS scientists have been recognized as world-class leaders, as evidenced by numerous national and international awards.

Assumptions

This Strategic Plan is based on the following external parameters.

Federal ownership of the site will continue and site boundaries will remain constant.

Offsite national repositories will be available for permanent disposal of nuclear waste.

Other DOE sites will be closed or reduced, thus increasing reliance on SRS for consolidation and disposition activities.

National and international commitments will increase emphasis on disposition of surplus nuclear materials.

Sufficient federal funding will be provided to accomplish assigned missions and support the reconfiguration of the site to optimize its ability to meet future requirements.

The site's designation as a National Environmental Research Park will continue.

Meeting Customer and Stakeholder Needs

Our Strategic Plan . . .

. . . strongly supports DOE's national missions of Nuclear Weapons Stockpile, Nuclear Materials, and Environmental Stewardship.

. . . aligns SRS attributes and performance with customer values and needs.

. . . includes diverse public input incorporated from formal and informal meetings, draft reviews, and professional planning critiques.

. . . addresses the concepts in the *Statement of Principles* signed by South Carolina Governor Jim Hodges and DOE Secretary Bill Richardson.

The SRS staff will continue to work with officials from South Carolina, Georgia, and other states, as well as other stakeholders in developing site planning activities.

Planning Integration

SRS planning starts with a vision for the future articulated by the site's senior management, with input from our customers, stakeholders, and employees. The Strategic Plan defines this vision in terms of specific goals, objectives, and strategies, for which accomplishments can be tracked. Documents covering every phase of site operations, including budgeting, allocating resources, executing yearly activities, and evaluating and improving our processes, are linked to this Strategic Plan. This linkage ensures that present decisions are made with future goals in mind and also ensures that the planning process reflects feedback and input from continuing activities and operations. The site's progress in executing the Strategic Plan is evaluated semi-annually.

The organizational framework used to implement the planning process includes an executive board, consisting of senior managers from all major DOE and contractor organizations; a working-level planning board, representing all major site organizations; and a professional planning staff. This planning process ensures integration of the stewardship missions.

SRS **planning** *starts with a* **vision** *of the future.*

View of the Future

A key problem facing the nation and the world is the management of excess nuclear materials, which pose a threat to worldwide security. SRS will play an important role in the transportation, stabilization, storage, and disposition of these materials, consistent with the site's capabilities and characteristics. SRS will also play a major role in nuclear weapons stockpile stewardship with the construction and operation of a new facility to extract tritium. The site has a significant, enduring, and increasing role in the future DOE Complex with ongoing waste management, cleanup, and nuclear material and stockpile missions. The site also places special emphasis on regulatory requirements, Defense Nuclear Facilities Safety Board recommendations, and risk reduction.

To fulfill these missions, SRS will begin a phased approach to reconfiguring the site, focusing on infrastructure, facilities, and human resources to meet the challenges of the 21st century. We will partner with other sites, national laboratories, and industries to accomplish our missions cost effectively, sharing knowledge and capabilities with others so the DOE Complex can achieve results at substantial cost and time savings. In support of its natural resources, SRS will also maintain its commitment to the principles of Sustainable Forest Management.

SRS WILL BE A KEY PARTICIPANT in the national science-based Stockpile Stewardship Program as we enter the 21st century. This program uses an appropriate balance of surveillance, experiments, and simulations to ensure the safety and reliability of the nation's nuclear weapons stockpile without nuclear testing.

TECHNOLOGICAL CAPABILITIES

We have demonstrated unique technological capabilities in tritium production and handling in support of the nation's defense programs. Our competence in management of nuclear weapons limited-life components (LLC), management of our tritium and nuclear materials inventory, and development of a modern tritium infrastructure demonstrate our commitment to excellence and maintenance of the nation's nuclear deterrent. Our applied science capabilities are directed by highly-trained personnel, providing the critical skills needed to develop, integrate, and deploy new technologies to enhance the productivity and efficiency of facility operations.

NUCLEAR WEAPONS SUPPORT

Cost-reduction efforts are essential to the continuation of a viable nuclear weapons program, so we must focus on better use of defense complex resources. We will support the DOE Headquarters' Defense Programs (DP) Office, which has established campaigns to develop and maintain specific critical capabilities to achieve weapons stockpile certification. We will continue to promote technical partnerships with other production sites and weapons design laboratories to facilitate the integration of innovative weapon product and process technologies. Our application of improved management practices in project execution will support cost-effective consolidation of existing facilities and construction of new facilities, leading to further reductions in operating costs and improvements in facility safety.

We have demonstrated **unique** *technological* **capabilities.** *to support the nation's defense.*

EVALUATIONS, IMPROVEMENTS AND FUTURE ACTIVITIES

The SRS Tritium Program strategies are routinely evaluated and updated to reflect national programmatic direction to ensure our ability to support the science-based Stockpile Stewardship Program. The basis for improvement is focused upon four areas to achieve success: our people, world class operations, modern facilities and equipment, and information management.

Our success depends on close coordination with our customers, which include the Department of Defense (DoD), the DOE-Headquarters DP Office, DOE-Albuquerque Operations Office, other production sites, and the weapons design laboratories. The Tritium Facility continues to perform its roles of safeguarding the nation's tritium reserve and in meeting all DoD LLC schedules. In addition, SRS has the responsibility for reservoir surveillance, an important element in the science-based Stockpile Stewardship Program.

We are engaged in the design, development, and construction of a modern, cost-effective Tritium Extraction Facility (TEF) to ensure future availability of tritium needed to maintain the nuclear weapons stockpile. This facility will be capable of extracting tritium gas from targets irradiated at Tennessee Valley Authority reactors.

In addition to our tritium work, SRS provides support for other Defense Program activities. As a result of the decision to close the Rocky Flats Environmental Technology Site, the Los Alamos National Laboratory was selected as the new plutonium pit production site. If DOE determines that increased pit production is required, SRS will assist in developing alternate fabrication capabilities. SRS continues to participate in DOE-commissioned studies to prepare for this potential need.

GOALS	OBJECTIVES	STRATEGIES
SS1 Sustain excellence in the conduct of tritium operations, delivery of tritium reservoirs, performance of surveillance testing, and development of technology to support the nation's weapons stockpile.	SS1.1 Meet annual tritium recycle and loading commitments as well as reservoir surveillance requirements.	SS1.1.1 Maintain confidence in the safety, reliability, and performance of nuclear weapons by meeting stockpile commitments.
		SS1.1.2 Enhance tritium technology, engineering applications, and critical skills through sharing information and forming partnerships with other DOE Complex sites.
		SS1.1.3 Meet technology and process development program milestones in support of Defense Programs campaigns.
		SS1.1.4 Support weapons system modification and development.
		SS1.1.5 Apply modern information management systems to manage and control tritium reserves to enhance safety and improve operational cost effectiveness.
SS2 Consolidate existing facilities and plan, design, and construct new facilities to support current and future stockpile requirements.	SS2.1 Maintain modern facilities, equipment, and technology to assure our ability to provide timely support to the Stockpile Stewardship Program requirements.	SS2.1.1 Meet design and construction milestones for the Tritium Facility Modernization and Consolidation Project.
		SS2.1.2 Accomplish Tritium Extraction Facility Project milestones to support a reliable future source of tritium.
		SS2.1.3 Complete the Non-Nuclear Reconfiguration Project within cost and schedule to provide enhanced capabilities for reservoir surveillance.
		SS2.1.4 Develop and implement an innovative, cost-effective plan for closure of Building 232-H to achieve significant future operational and maintenance cost savings.
		SS2.1.5 Continue improvement of facilities for technology development and process support.
		SS2.1.6 Provide for a viable contingent source of tritium by meeting Accelerator Production of Tritium project design milestones.
	SS2.2 Support the development of contingency plans for a new pit production facility to meet future stockpile requirements as national needs emerge.	SS2.2.1 Develop partnerships with the national weapons laboratories and Oak Ridge Y-12 Plant to outline roles for each organization in a large-scale pit manufacturing project.

SRS'S EXTENSIVE EXPERIENCE in nuclear materials management, operations, applied technical expertise, and safeguards and security programs, as well as its industrial infrastructure, enable it to undertake an important role in nuclear materials stewardship. The program's missions are to manage national nuclear resources until needed, reduce the risk of nuclear proliferation, and minimize health and safety risks to the workers, the public, and the environment.

Disposition of Nuclear Materials

SRS plays a key role in DOE's initiative to provide safe and secure storage and disposition of excess nuclear materials and in the stabilization and preparation for use of certain isotopes. In support of the disposition mission, SRS develops and demonstrates advanced disposition technologies and concepts. The site supports national objectives and international agreements to reduce inventories of fissile materials, which can be used for making weapons. For example, SRS supports and assists Russia in verifying its nuclear material inventory. As an enduring site, SRS will maintain its capability for stabilizing materials for the DOE Complex and will develop strategies for leveraging existing nuclear capabilities.

Plutonium and Spent Fuel Missions

As the designated site for plutonium disposition missions, SRS assists DOE Headquarters (HQ) with their overall management role for design and construction activities for new plutonium disposition facilities at SRS. In addition, we continue to collaborate with DOE-HQ and others to define SRS operational responsibilities for these new facilities to include both actual operation and operational support roles. These facilities include storage, pit disassembly, and conversion; plutonium immobilization; and mixed oxide fuel fabrication.

SRS implements U.S. nonproliferation policies by reducing the worldwide nuclear proliferation threat posed by spent nuclear fuel from foreign and domestic research reactors. SRS will develop and implement technologies to convert spent nuclear fuel at the site to a form suitable for disposal in a permanent federal repository.

Beneficial Reuse

SRS will support beneficial reuse of its nuclear material assets to satisfy potential emerging needs in deep space exploration, nuclear science research, and energy. To accomplish this goal, the site will build on the success of its collaboration with the National Aeronautics and Space Administration (NASA). In addition, the site will continue to provide nuclear research materials to serve the nation in coming years. Another potential opportunity includes blending down surplus highly-enriched uranium (HEU) currently located at SRS and Oak Ridge and contracting its sale as fuel to power generating utilities such as the Tennessee Valley Authority (TVA).

SRS provides the

highest standards

of safeguards and security for nuclear materials.

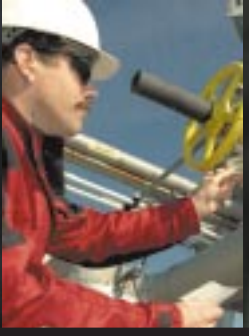
Safeguards and Security

SRS is committed to providing the highest standards of safeguards and security for all aspects of stabilization, transportation, storage, and disposition of nuclear materials and to incorporating appropriate International Atomic Energy Agency (IAEA) verification standards. Currently, SRS is setting new standards in safeguards for storage applications through its work in the U.S./Russia/IAEA Tri-Lateral Initiative. SRS has developed and is supporting the Complex-wide implementation of an innovative approach for enhancing the accountability system for nuclear materials – the DOE Local Area Network Material Accounting System (LANMAS). In addition, SRS is deploying technology and operational expertise to address the security and safeguards of foreign nuclear materials.

To support Nuclear Materials Stewardship missions, SRS also provides operational and technical expertise to other DOE sites and the national laboratories.

GOALS	OBJECTIVES	STRATEGIES
NMS1 Reduce the global nuclear danger by providing safe and secure storage, stabilization, and disposition of nuclear materials and spent nuclear fuel.	NMS1.1 Complete design and construction of integrated plutonium facilities at SRS by 2008 to reduce the plutonium inventory available for weapons.	NMS1.1.1 Optimize plutonium storage capability in existing and planned facilities. NMS1.1.2 Complete the SRS research program for the Plutonium Immobilization Project by 2004. NMS1.1.3 Provide operational and technical support and review during design, construction, and startup of the Pit Disassembly and Conversion Facility, Plutonium Immobilization Facility, and Mixed Oxide Fuel Fabrication Facility.
	NMS1.2 Eliminate present inventories of off-specification HEU available for weapons by 2010.	NMS1.2.1 Blend down 16 metric tons of HEU to low-enriched uranium (LEU) by 2008. NMS1.2.2 Support development and implementation of a strategy to disposition surplus HEU that does not meet the Oak Ridge Y-12 Plant materials acceptance criteria.
	NMS1.3 Receive, store, and disposition 30,000 aluminum-based spent nuclear fuel assemblies from foreign and domestic sources through 2035 to make the nuclear materials unavailable for weapons.	NMS1.3.1 Design, build, and startup treatment and storage facilities for aluminum-based spent nuclear fuel by 2008. NMS1.3.2 Manage the spent nuclear fuel program to allow closure of the Receiving Basin for Offsite Fuels by 2007 without significantly affecting fuel receipt commitments. NMS1.3.3 Maintain current spent nuclear fuel processing capability until the new treatment and storage facilities are demonstrated.
	NMS1.4 Ensure that legacy materials from the DOE Complex can be stabilized by maintaining essential processing, storage, and handling capabilities.	NMS1.4.1 Complete stabilization of legacy nuclear materials identified in the approved *Phased Canyon Strategy.* NMS1.4.2 Receive the remaining Rocky Flats surplus plutonium designated for disposition at SRS by 2002. NMS1.4.3 Develop process technologies to stabilize nuclear materials. NMS1.4.4 Develop a plan by 2001 for use/closure of the canyons that addresses the needs of DOE, the states, and the surrounding communities.
	NMS1.5 Support national efforts to develop and demonstrate advanced technologies to disposition nuclear materials.	NMS1.5.1 Apply existing technical and engineering expertise in fuel processing, target fabrication, and reactor operations to develop and demonstrate advanced concepts such as accelerator transmutation of waste. NMS1.5.2 Support use of SRS as a site for demonstration and implementation of advanced disposition concepts.

GOALS	OBJECTIVES	STRATEGIES
NMS2 Serve the national interests by providing nuclear materials for scientific research and energy programs.	NMS2.1 Provide 225 metric tons of low-enriched uranium, derived from highly enriched uranium blenddown, to be converted for beneficial use as commercial fuel by 2008.	NMS2.1.1 Support DOE-HQ completion of an interagency agreement with the TVA specifying the use of LEU for commercial fuel. NMS2.1.2 Provide the technology and facilities for transferring the LEU to TVA.
	NMS2.2 Provide heavy isotope feedstock for scientific research and isotope production.	NMS2.2.1 Stabilize, through vitrification, americium/curium solutions and reactor target materials by 2005 and support its future transport to Oak Ridge National Laboratory. NMS2.2.2 Convert neptunium solution to oxide to be used as plutonium 238 isotope feed stock for NASA programs by 2007.
	NMS2.3 Maintain a strategic reserve of heavy water to satisfy DOE programmatic requirements and sell the surplus inventory.	NMS2.3.1 Safely store sufficient inventories of heavy water to meet commitments for tritium production and for use by the National Institute of Standards and Technology. NMS2.3.2 Sell the surplus heavy water for use in peaceful applications.
NMS3 Establish SRS as a global leader in the advancement of domestic and international nuclear nonproliferation programs.	NMS3.1 Enhance the availability, timeliness, and reliability of information relative to nuclear material inventories to increase the effectiveness of planning, storage, and safeguards of these materials.	NMS3.1.1 Maximize deployment of the state-of-the-art material accounting software package, LANMAS, at other DOE sites. NMS3.1.2 Lead the development of a DOE Complex-wide nuclear materials data warehouse and implement its use by 2003.
	NMS3.2 Provide technical assistance in the implementation of international treaty and arms control programs.	NMS3.2.1 Support the annual verification measures under the Plutonium Production Reactor Agreement. NMS3.2.2 Support the Fissile Materials Cutoff Treaty negotiations by developing a model verification methodology by 2003.
	NMS3.3 Provide technical leadership in the development and application of advanced scientific and engineering concepts to safeguard nuclear materials.	NMS3.3.1 Under the U.S./Russia/IAEA Tri-Lateral Initiative, support and assist Russian and other facilities in improving measurement and verification of nuclear materials. NMS3.3.2 Implement measurement and containment/surveillance technologies to support IAEA Tri-Lateral verification for the K-Area Materials Storage Facility and demonstrate similar technologies in other areas of K Reactor by 2002.



SRS ACHIEVES EXCELLENCE in environmental stewardship by protecting human health and the environment; reducing the risks associated with past, current, and future operations; and restoring and sustaining the site's natural resources. SRS is committed to meeting cleanup needs as described in more detail in *Paths to Closure*.

Environmental Activities

Environmental Stewardship is integral to the design, construction, and operation of all site facilities and programs at SRS. Activities include waste disposition, pollution prevention, disposition of excess facilities, and monitoring and restoring environmental quality.

SRS successfully engages other DOE sites, regulators, and stakeholders to advance the best environmental solutions. The key to successful environmental stewardship is to produce tangible results safely and cost-effectively through innovative practices and deployment of technologies. Many technologies are being actively shared with other DOE sites as well as with state and federal agencies to facilitate faster and more efficient waste disposition.

The SRS High-Level Waste System has successfully expanded its operation from safe storage of wastes to waste removal, immobilization of waste in glass, and preparation of vitrified waste canisters for transport to an offsite repository. The High-Level Waste Tank Closure Program is the leader for the DOE Complex.

Environmental restoration activities have progressed well over the past few years. Of all inactive waste sites at SRS, approximately half are closed or are in remediation. We are also actively managing the legacy of low-level, mixed, hazardous, and transuranic waste to expedite its final treatment and disposal.

Successful environmental stewardship produces **tangible results.**

Compliance and Outreach

SRS is committed to monitoring and sampling the environment and remaining compliant with state and federal regulations to protect our resources and community. SRS will maintain its International Standards Organization (ISO) 14001 *Environmental Management System* certification, demonstrating the site's commitment to environmental excellence.

Designated as the nation's first National Environmental Research Park (NERP) in 1972, SRS is home to increasingly viable and diverse communities of plants and animals, including endangered, threatened, and sensitive species. The site is a 310-square-mile laboratory where the environmental impacts of human activity are studied. SRS works cooperatively with state and federal agencies to ensure that site missions are balanced with the stewardship of natural resources and the appropriate level of public access.

Outreach and education efforts are critically important and contribute to the site's efforts to improve science literacy and stakeholder involvement. Through the SRS Citizens Advisory Board, public representatives are actively participating in SRS's environmental decision-making process.

A primary environmental stewardship challenge for the future is to meet regulatory compliance commitments in a more cost-effective manner. Other challenges include disposition of excess facilities, remediating groundwater contamination from past SRS activities, and enhancing the site's biodiversity.

GOALS	OBJECTIVES	STRATEGIES
ES1 Manage newly generated and legacy wastes to prevent pollution, protect human health and the environment, and expedite ultimate disposal.	ES1.1 Treat, store, and dispose of waste in compliance with environmental laws and regulations.	ES1.1.1 Reduce the legacy waste inventory as specified in *Paths to Closure*.
		ES1.1.2 Improve capabilities for treatment, storage, and disposal of waste, according to established regulatory and site schedules and requirements.
		ES1.1.3 Deploy more efficient technologies and innovations to reduce life cycle costs in waste management.
		ES1.1.4 Deploy a high-level waste salt processing technology to assure continual progress in the HLW tank closure.
		ES1.1.5 Ensure SRS HLW and other waste forms such as transuranic waste are included in all planning efforts for offsite federal repositories to limit interim storage at SRS.
	ES1.2 Reduce operational waste generation by 10 percent annually for hazardous, mixed, transuranic, low-level, and sanitary waste.	ES1.2.1 Fully integrate pollution prevention concepts into all SRS operations and project planning by FY03.
		ES1.2.2 Deploy innovative waste reduction technologies to reduce costs.
ES2 Remediate inactive waste sites and groundwater units and manage excess facilities to reduce risks and costs.	ES2.1 Clean up groundwater units, waste units, and close high-level waste tank systems to meet or exceed compliance with federal and state requirements and agreements.	ES2.1.1 Remediate or include in the remediation life cycle phase all high risk/priority units by the end of FY06 while maintaining a balanced program of the remaining medium and low risk units.
		ES2.1.2 Reduce life cycle costs of environmental cleanup by deploying more efficient, innovative technologies.
		ES2.1.3 Approve the revised *Industrial Wastewater Closure Plan for F- and H-Area High-Level Waste Tank Systems*, which is the cornerstone for all future HLW tank closure activities.
		ES2.1.4 Continue to deploy monitoring and control mechanisms to reduce the potential movement of contaminants offsite.
	ES2.2 Manage excess and/or inactive facilities to integrate risk reduction and disposition with the cleanup mission.	ES2.2.1 Complete deactivation planning prior to the end of mission for each operating facility.
		ES2.2.2 Use the Asset for Services Program and other alternative funding strategies to augment funding for future facility and asset disposition programs.

GOALS	OBJECTIVES	STRATEGIES
ES3 Control, minimize, and monitor releases of tritium to the Savannah River and communicate results to stakeholders.	ES3.1 Minimize tritium released to the Savannah River by controlling discharges and containing contaminated groundwater.	ES3.1.1 Operate existing facilities such that tritium discharges are as far below regulatory limits as reasonably achievable. ES3.1.2 Locate and design new facilities that may involve tritium to minimize any impact on the Savannah River. ES3.1.3 Deploy innovative control mechanisms to reduce tritium releases to the Savannah River from waste sites.
	ES3.2 Communicate monitoring results to stakeholders.	ES3.2.1 Monitor the environment to ensure that the Savannah River continues to be a safe source of drinking water and communicate results to the public in a timely manner. ES3.2.2 Work with stakeholders to ensure that monitoring and communications meet their needs.
ES4 Characterize, evaluate, restore, and sustain the health, productivity, and diversity of natural resources.	ES4.1 Document the effects of past, present, and proposed activities on SRS ecosystems and cultural resources and communicate the results to decision-makers and stakeholders.	ES4.1.1 Identify, characterize, and inform the public of the processes that control the movement and bioavailability of wastes in SRS ecosystems. ES4.1.2 Maintain outreach and education programs to contribute to improved science education and stakeholder involvement. ES4.1.3 Continue to protect SRS archaeological and historic resources. ES4.1.4 Ensure commitment to NERP status by continued maintenance of the DOE Research Set-Aside Program as well as research and evaluation of the effects of human activities on the environment. ES4.1.5 Perform research and publish the results in peer-reviewed scientific literature to aid in making informed decisions.
	ES4.2 Apply the principles of sustainable forest management to SRS natural resources.	ES4.2.1 Continue habitat improvement to maintain or meet the recovery plan population objectives of endangered, threatened, and sensitive species. ES4.2.2 Continue to restore native SRS habitats to improve ecosystem health and biodiversity. ES4.2.3 Revisions to SRS Natural Resources Management Plan will be developed in cooperation with stakeholders. ES4.2.4 Manage the SRS natural resources in accordance with the SRS Natural Resources Management Plan.

CORPORATE MANAGEMENT ADDRESSES the fundamental business principles, values, and systems critical to the success of SRS's stewardships. Our past successes and future activities are built on five Focus Areas that site management emphasizes. These Focus Areas include Safety and Security; Technical Capability and Performance; Community, State, and Regulator Relationships; Cost Effectiveness; and Corporate Perspective.

Safety and Security

The objectives of the Safety and Security Focus Area are to ensure the protection of the workers, public, and the environment and to protect our national security interests. SRS has led the DOE Complex in effectively implementing the Integrated Safety Management System (ISMS), using the strong programs supporting our world-class safety and health record. Another key component to our success is the assurance that nuclear materials stored at SRS are properly secured. As in the past, SRS will maintain an effective deterrent through the integrated use of highly-trained protective force personnel, physical security systems, and administrative controls.

SRS seeks **innovative ways** *to accomplish its missions.*

Technical Capability and Performance

Facilities, infrastructure, and workforce are essential requirements for SRS mission success. The Technical Capability and Performance Focus Area strives to achieve a diverse workforce that is highly trained, qualified, and motivated and to ensure that SRS facilities and infrastructure are available to support SRS missions. Our employees must be equipped with tools and support to be well informed, technically proficient, and results-oriented. SRS is strongly committed to the diversity of our workforce and to maintaining a productive work environment of mutual respect and equal opportunity where the talents and capabilities of all employees are recognized.

The Savannah River Technology Center is integral to the success of SRS operations. SRTC's highly-experienced technical staff is dedicated to maintaining and improving site operations while providing the technical vision for new missions and long-term stewardship. SRTC ensures the best solutions are available by partnering with industry, universities, and other DOE laboratories.

Site infrastructure will need to be significantly upgraded to incorporate technological advances essential to support our stewardship responsibilities and to extend the useful life of facilities and supporting systems that, in many cases, are nearly 50 years old. We must maintain the site infrastructure to satisfy all mission requirements while focusing on infrastructure savings and challenges associated with site reconfiguration.

Community, State, and Regulator Relationships

In the Community, State, and Regulator Relationships Focus Area, SRS demonstrates to our community, states, and regulatory agencies that we meet regulatory obligations and communicates openly and honestly. SRS strives for a positive relationship with the public. There is significant community involvement in the planning and budget processes and good community understanding of the site's role in supporting current and future DOE missions and programs. Additionally, our response to non-site-related needs of the surrounding community demonstrate that SRS is committed to being an active good neighbor. Our strong leadership in environmental management and commitment to our regulators is evidenced by re-certification under the International Standards Organization (ISO) Standard ISO14001, *Environmental Management Systems.*

Cost Effectiveness

The focus on cost effectiveness will enhance our stewardship of financial resources and assets to ensure that products and services are delivered through the efficient operation of facilities, cost-effective contracting and effective project management. To maximize efficiency and reduce costs, SRS must reduce annual operating costs and reduce the number of aging facilities no longer required for operations. Faced with budgetary pressures, SRS continually seeks more innovative ways to accomplish its missions.

Corporate Perspective

The Corporate Perspective Focus Area objective is to integrate activities across the site, throughout the DOE Complex, and with other governmental agencies. Maintaining a corporate perspective in planning, integrated decision-making, and efficient management is fundamental to SRS's successful mission execution.

GOALS	OBJECTIVES	STRATEGIES
Safety and Security		
CM1 Continue to excel in safety and health performance.	CM1.1 Ensure continued maintenance and improvement of ISMS throughout the SRS.	CM1.1.1 Implement recommendations from independent ISMS reviews. CM1.1.2 Incur no exposures or releases of radioactive or hazardous materials that exceed regulatory requirements. CM1.1.3 Continue to improve injury/lost workday performance. CM1.1.4 Incorporate behavior-based safety practices sitewide.
CM2 Provide a level of security for SRS's nuclear materials, facilities, government property, classified and sensitive information, site employees, and the public commensurate with the defined threat.	CM2.1 Implement and maintain an appropriate level of security through the integration of highly trained protective force personnel, comprehensive physical security systems, personnel and information security programs, contingency plans, and administrative controls.	CM2.1.1 Develop and maintain appropriate protection levels for critical security interests. CM2.1.2 Ensure security is addressed during site reconfiguration activities. CM2.1.3 Use advanced computer-based simulation models to analyze threats and proposed protective measures. CM2.1.4 Use performance testing, surveys, audits, and assessments to determine the effectiveness of SRS security programs. CM 2.1.5 Protect SRS technology and classified or sensitive information from unauthorized disclosure.
Technical Capability and Performance		
CM-3 Provide a technically capable workforce and modernized infrastructure to effectively and efficiently perform the SRS stewardship missions.	CM3.1 Efficiently configure and optimize SRS infrastructure to meet the 21st century stewardship programs.	CM3.1.1 Develop plans to reconfigure SRS to consolidate operations and infrastructure for more efficient use of resources. CM3.1.2 Establish a stable and consistent long-term budget strategy for infrastructure improvements. CM3.1.3 Maintain infrastructure systems in a safe and environmentally sound state of operational readiness. CM3.1.4 Employ energy and water conservation strategies. CM3.1.5 Deactivate unneeded infrastructure components to reduce surveillance, maintenance, and energy costs.
	CM3.2 Enhance and maintain the knowledge, skills, and abilities of SRS workers to meet stewardship responsibilities.	CM3.2.1 Develop and implement workforce management plans for each SRS organizational component for the purpose of maintaining technical competencies via a qualified, trained, diverse, and motivated workforce. CM3.2.2 Continue to promote initiatives to address critical needs, enhance workforce diversity, and identify tools, such as teamwork, necessary to prudently and effectively manage the SRS workforce. CM3.2.3 Increase worker contribution by involvement in all aspects of work planning and disciplined operations. CM3.2.4 Conduct workforce analyses to optimize staffing resources and skills.

GOALS	OBJECTIVES	STRATEGIES
Community, State and Regulatory Relationships		
CM4 Demonstrate excellence in customer satisfaction and stakeholder/regulator involvement.	CM4.1 Build trust and communicate openly, honestly, and responsibly with employees, customers, stakeholders, and regulators.	CM4.1.1 Conduct public participation programs and maintain open lines of communication, which allow opportunities for employees, customers, all affected stakeholders, and regulators to participate in the SRS decision-making processes. CM4.1.2 Include state governmental officials in site planning. CM4.1.3 Support the surrounding communities and states through asset reuse and leveraging of site resources
Cost Effectiveness		
CM5 Implement cost savings, cost avoidance, and productivity improvement initiatives that demonstrate responsible stewardship of public funds.	CM5.1 Achieve measurable and continuous cost reductions and productivity improvements by doing the right thing, the right way, the first time.	CM5.1.1 Continue implementation and institution of project management initiatives. CM5.1.2 Employ competitiveness and accountability in contracting, project management, and operations performance. CM5.1.3 Optimize mission accomplishment, resource use, and oversight through a comprehensive planning and risk-based prioritization process. CM5.1.4 Continue to pursue privatization initiatives and expand the use of commercial procurement and subcontracting practices. CM5.1.5 Implement technologies to optimize performance in accomplishing the mission.
Corporate Perspective		
CM6 Demonstrate leadership and teamwork across the site, DOE Complex and with other governmental agencies by the sharing of expertise, facilities, and technology.	CM6.1 Be a recognized leader in maintaining a corporate perspective that integrates cost-effective solutions across the DOE Complex.	CM6.1.1 Proactively support international, national, DOE-HQ, and Field Office initiatives. CM6.1.2 Share SRS expertise with international, national, state, and local agencies as well as the DOE Complex. CM6.1.3 Continue to identify opportunities in which the site could meet the needs of the region and other sites in the DOE Complex.

GLOSSARY

Assets for Services
an SRS Program adopted October 1999, wherein the remaining salvage value of surplus government assets is traded or exchanged for asset disposition services

Bioavailability
the fraction of a contaminant that exists in a form that can be taken up by organisms

Campaign
one of the focused and defined efforts to develop and maintain specific critical capabilities needed to achieve weapons stockpile certification confidence

Critical security interests
the term used by the Safeguards and Security community that primarily refers to security targets associated with theft, sabotage, or unauthorized control of special nuclear material. Other security interests include property, classified material, sensitive information, etc.; however, critical security interests require the highest protection level.

Deactivation planning
the work required to place a shutdown facility into a safe and stable condition by eliminating or reducing residual hazards

DOE-Research Set-Aside Program
thirty tracts of land, comprised of approximately 14,000 acres, that have been set aside for ecological research and are protected from most routine site maintenance and forest management activities

Ecosystem
a conceptual unit within which communities of living organisms exchange energy, materials, and information with one another and with their chemical and physical environment

Excess
no longer needed for DOE missions

Excess nuclear material
material that is not in active use by a DOE program which is required and held for potential programmatic use to support future mission requirements

Fissile Material Cutoff Treaty
an initiative for a multilateral treaty banning the production of HEU and plutonium (Pu) for nuclear explosive purposes or use outside of international safeguards

Hammer Award
award presented to teams of federal employees who have made significant contributions in support of reinventing government principles

Infrastructure
system of basic physical assets required to support a site mission. This includes non-process facilities, power, water lines, sewer lines, bridges, roads, etc.

Limited Life Components (LLC)
weapons components which must be replaced periodically to maintain the effectiveness of the nuclear weapons stockpile

SRS Natural Resources Management Plan
provides the strategy and assigns responsibilities for natural resources management activities on SRS that are outside the developed areas. The NRMP focuses on programs conducted by the USDA Forest Service and includes programs of the Savannah River Archeological Research Program, the South Carolina Department of Natural Resources, and the research-related programs of the Savannah River Ecology Laboratory.

Non-Nuclear Reconfiguration Project
re-establishes surveillance and functional testing capabilities at SRS that were previously performed at the Department of Energy's Mound Facility

Paths to Closure
the Environmental Management Program's detailed projections on the scope, schedule and cost at each site for the cleanup of contaminated soil, groundwater, and facilities; treating, storing, and disposing of waste; and effective management of nuclear materials and spent nuclear fuel

Phased Canyon Strategy - Visionary Roadmap
a planning and scheduling document that outlines the strategy for executing current, future, confirmed, and proposed nuclear material stabilization missions utilizing SRS Canyons and associated facilities. This roadmap guides resource planning and is periodically updated to reflect program progress and resource allocation decisions.

Reservoir surveillance
a program to selectively evaluate the functionality of components in order to assess safety and reliability

Risk-based prioritization process
a prioritization process for ranking tasks and projects in determining the site budget. Each work package (task or project) is scored for each of nine criteria. A hazard analysis and authorization basis safety documentation is used to determine the hazards associated with the work and evaluate the risk.

Science-based Stockpile Stewardship
in the absence of nuclear testing, ensuring a safe, reliable, and effective nuclear stockpile through high performance computer modeling and numerical simulation, which is based on past nuclear test data, combined with new experimental results, surveillance, and improved detection and predictive capabilities

Site Treatment Plan
DOE plan, submitted and originally approved by the South Carolina Department of Health and Environmental Control, constituting a consent order under the Resource Conservation and Recovery Act, for developing treatment capacities and technologies to treat mixed waste

GLOSSARY

Statement of Principles

an agreement between the Secretary of Energy and the South Carolina Governor that forms the foundation for a cooperative working relationship to complete the cleanup of the lingering legacy of the Cold War

Surplus Nuclear Material

material that is not in active use by a DOE program which is not needed to support future mission requirements. This definition includes plutonium materials being held for final disposition by the Office of Fissile Materials Disposition

Sustainable forest management

the management and use of forests and forest land that maintains their biodiversity, productivity, regeneration capacity, and vitality, and their potential to fulfill relevant ecological, economic, and social functions without causing damage to other ecosystems

Sustainable development

the use of resources to meet the needs of the present without compromising the ability of future generations to meet their own needs

Tri-Lateral Initiative

the Trilateral Initiative of September 1996 was launched by the Minister of Atomic Energy of the Russian Federation, Secretary of Energy of the United States, and the Director General of the International Atomic Energy Agency (IAEA). The aim of the initiative was to fulfill the commitments made by United States and Russian presidents concerning IAEA verification of weapon-origin fissile materials and to complement their commitments regarding the transparency and irreversibility of nuclear arms reductions.

Waste

unwanted/unusable radioactive and non-radioactive, liquid, solid, and gaseous materials from the production of desired end products during processing, conduct of operations, or decommissioning and demolition activities which includes high-level waste, low-level waste, TRU, and mixed wastes. Examples of this waste include materials, equipment, structures, job control items, and soil. Legacy wastes are wastes generated in the past.

Waste unit

all active and inactive basins, pits, and piles that were used to collect and store waste

ACRONYMS

DoD	*Department of Defense*
DOE	*Department of Energy*
DP	*Defense Programs*
FY	*fiscal year*
HEU	*highly enriched uranium*
HLW	*high-level waste*
IAEA	*International Atomic Energy Agency*
ISMS	*Integrated Safety Management System*
LANMAS	*Local Area Network Material Accounting System*
LEU	*low-enriched uranium*
LLC	*limited life components*
NASA	*National Aeronautics and Space Administration*
NERP	*National Environmental Research Park*
SRS	*Savannah River Site*
SRTC	*Savannah River Technology Center*
TRU	*transuranic*
TVA	*Tennessee Valley Authority*
VPP	*Voluntary Protection Program*

REFERENCED PLANS

Industrial Wastewater Closure Plan for F- and H-Area High-Level Waste Tank System

Paths to Closure (1999)

Phased Canyon Strategy – Visionary Roadmap

Natural Resources Management Plan (1999)

CONTACTS

For more information on the Savannah River Site and our goals, please contact the Site Planning Office by calling (803) 725-1579, by electronic mail at the address planning@srs.gov, or by writing us at the U.S. Department of Energy, Savannah River Site, P. O. Box A, Aiken, SC 29802.

The Savannah River Site manages nuclear materials
in support of the national defense and U.S. nuclear nonproliferation efforts.
We also develop and deploy technologies
to treat nuclear and hazardous wastes left from the Cold War
and to improve the environment.

SRS
savannah river site

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